

Abstract of the Disclosure

A multi-format digital video production system enables a user to process an input video program to produce an output version of the program in a final format which may have a different frame rate, pixel dimensions, aspect ratio, or any combination thereof. An internal production format of 24 fps is preferably chosen to provide the greatest compatibility with existing and planned formats associated with HDTV standard 4:3 or widescreen 16:9 high-definition television, and film. Images are re-sized horizontally and vertically by pixel interpolation, thereby producing larger or smaller image dimensions so as to fill the particular needs of individual applications. Frame rates are adapted by inter-frame interpolation or by traditional schemes, including "3:2 pull-down" for 24-to-30 fps conversions. Simple speed-up (for 24-to-25 conversions) or slow-down (for 25-to-24 conversions) for playback, or by manipulating the frame rate itself using a program storage facility with asynchronous reading and writing capabilities. The step of converting the signal to a HDTV format is preferably performed using a higher sampling clock frequency and a resizing to HDTV format frame dimensions in pixels. An integrated system having digital television standard conversion capabilities is disclosed, wherein audio/video input signals are received in high-speed serialized form, transferred to a high-speed data bus, and fed to one or more standards converters operating according to the invention, thereby providing a variety of serial or parallel digital signal outputs. The system may further include a wide-/local-area network interface, mass storage, digital effects unit and workstations for multiple users.